

**Work Order ID 159497****\*159497\***

Page 1

Wednesday, April 12, 2017 11:38:15 AM

Item ID: D4732-17

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Label

Start Date: 4/12/2017 Start Qty: 6.00

**\*6\***

Cust Item ID:

Required Date: 4/19/2017 Req'd Qty: 6.00

**\*6\***

Customer:

Reference:

Approvals: Process Plan: DAS 13 9-89 Date: APR 12 2017

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

Draw Nbr

Revision Nbr

D4732

B

100

0.00

**\*100\***

Purchasing

Purchasing

Memo

Issue P/O: 35946

E-mail or Ship electronic file and or dwg to vendor

Manufacture as per Dwg and supplied files

Possible supplier: Studio Letrage

Material release note is required.

0.00

6 APR 12 2017 DAS 13 9-89

110

Receive &amp; Inspect for Damage &amp; Mat'l Certs

0.00

**\*110\***

Packaging

Packaging

Memo

0.12

6x 8174-18

# Work Order ID 159497

Wednesday, April 12, 2017 11:38:15 AM

**\*159497\***

Page 2

Item ID: D4732-17 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Label  
 Start Date: 4/12/2017 Start Qty: 6.00 **\*6\*** Cust Item ID:  
 Required Date: 4/19/2017 Req'd Qty: 6.00 **\*6\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                                           | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp                   |
|--------------------------------|--------------------------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------------------------|
| 120                            | QC6- Inspect dimensions to drawing                                 | 0.00                 |         |        |              |               |               |                  |                                  |
| <b>*120*</b>                   |                                                                    |                      |         |        |              |               |               |                  |                                  |
| QC                             | Memo                                                               | 0.00                 |         |        |              |               |               |                  |                                  |
| Quality Control                |                                                                    |                      |         |        |              |               |               |                  |                                  |
|                                |                                                                    |                      |         |        |              |               |               |                  | DAS<br>38<br>9-89<br>APR 18 2017 |
| 130                            | Identify as per dwg & Stock Location <u>MFOOS</u>                  | 0.00                 |         |        |              |               |               |                  |                                  |
| <b>*130*</b>                   |                                                                    |                      |         |        |              |               |               |                  |                                  |
| Packaging                      | Memo                                                               | 0.06                 |         |        |              |               |               |                  |                                  |
| Packaging                      | ***ONE YEAR EXPIRED DATE FROM<br>RECEIVING: <u>MAR 18 2018</u> *** |                      |         |        |              |               |               |                  |                                  |
|                                |                                                                    |                      |         |        |              |               |               |                  | DAS<br>6<br>9-89<br>APR 18 2017  |
| 140                            | QC21- Final Inspection - Work Order Release                        | 0.00                 |         |        |              |               |               |                  |                                  |
| <b>*140*</b>                   |                                                                    |                      |         |        |              |               |               |                  |                                  |
| QC                             | Memo                                                               | 0.60                 |         |        |              |               |               |                  |                                  |
| Quality Control                |                                                                    |                      |         |        |              |               |               |                  |                                  |
|                                |                                                                    |                      |         |        |              |               |               |                  | 17/4/2017                        |

M 2017/04/19  
 DAS  
21  
9-89

# Picklist Print

Wednesday, April 12, 2017 11:38:15 AM

Page

Work Order ID: 159497

**\*159497\***

Parent Item: D4732-17

**\*D4732-17\***

Parent Item Name: Label

Start Date: 4/12/2017

Required Date: 4/19/2017

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV:A 12.11.08 AS PER DWG REV.A DD VERF:JLM

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|

D4732-17P

Purchased

No

100

Each

0.0000

1

6

**\*D4732-17P\***

**\*\***

Label

*6x 8017-4-18*

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                              |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Cross tube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                              |  |
| Date : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Step #: _____                                                                                                                                                                      | QTY Effective : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | MRB (QSI042) Approval                        |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                    | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | Completed By                                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | Lead hand / Supervisor Approval Verification |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | QC / QA Coordinator Approval                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                              |  |
| <b>Root Cause</b><br><div style="display: flex;"> <div style="flex: 1;">             Environment <input type="checkbox"/><br/>             Design <input type="checkbox"/><br/>             Doc/Data <input type="checkbox"/><br/>             Equip/Tooling <input type="checkbox"/><br/>             Handling/Pre <input type="checkbox"/><br/>             Material <input type="checkbox"/><br/>             Internal Transport <input type="checkbox"/><br/>             Tribal Knowledge <input type="checkbox"/><br/>             LOA <input type="checkbox"/><br/>             Substation <input type="checkbox"/><br/>             Past Expiry Date <input type="checkbox"/><br/>             Misidentified <input type="checkbox"/> </div> <div style="flex: 1;">             No Re-verification <input type="checkbox"/><br/>             Operator <input type="checkbox"/><br/>             Offset/Setup <input type="checkbox"/><br/>             Supplier <input type="checkbox"/><br/>             Training <input type="checkbox"/><br/>             Use for Testing <input type="checkbox"/><br/>             Poor Information <input type="checkbox"/><br/>             Rushing <input type="checkbox"/><br/>             Product Improvement <input type="checkbox"/><br/>             Process Improvement <input type="checkbox"/><br/>             Manufacturing Process <input type="checkbox"/><br/>             Past Due <input type="checkbox"/> </div> </div> |                                                                                                                                                                                    | <b>FAULT CATEGORY</b><br><div style="display: flex;"> <div style="flex: 1;">             Pressure/Forced <input type="checkbox"/><br/>             Bending <input type="checkbox"/><br/>             Centre Not Concentric <input type="checkbox"/><br/>             Cracks <input type="checkbox"/><br/>             Crimp/Kink/Ripple/Wave <input type="checkbox"/><br/>             Cuffs <input type="checkbox"/><br/>             Crushing <input type="checkbox"/><br/>             Heat Treat <input type="checkbox"/><br/>             Wave/Twist in Tube <input type="checkbox"/><br/>             Marks/Chatter <input type="checkbox"/> </div> <div style="flex: 1;">             Temperature/Cure <input type="checkbox"/><br/>             Set-up <input type="checkbox"/><br/>             BOM/Route <input type="checkbox"/><br/>             Broken/Damage/Defect <input type="checkbox"/><br/>             Inspection Incomplete/Unqualified <input type="checkbox"/><br/>             Contamination <input type="checkbox"/><br/>             Countersink <input type="checkbox"/><br/>             Cut Too Short <input type="checkbox"/><br/>             Instructions Incomplete/Unclear <input type="checkbox"/><br/>             Drill Holes <input type="checkbox"/> </div> <div style="flex: 1;">             Power Loss/Surge <input type="checkbox"/><br/>             Folio/Program <input type="checkbox"/><br/>             Grain <input type="checkbox"/><br/>             Weld <input type="checkbox"/><br/>             Wrong Stock Pulled <input type="checkbox"/><br/>             Out of Sequence <input type="checkbox"/><br/>             Off-set <input type="checkbox"/><br/>             Misabeled <input type="checkbox"/><br/>             Fit/Function <input type="checkbox"/><br/>             Misaligned/off center <input type="checkbox"/> </div> <div style="flex: 1;">             Positioned Wrong <input type="checkbox"/><br/>             Outside Dimensions <input type="checkbox"/><br/>             Over/Under tolerance <input type="checkbox"/><br/>             Part Incorrect <input type="checkbox"/><br/>             Part Lost/Missing <input type="checkbox"/><br/>             Part Moved <input type="checkbox"/><br/>             Drawing <input type="checkbox"/><br/>             Finish <input type="checkbox"/><br/>             Misread <input type="checkbox"/><br/>             Turning Sequence <input type="checkbox"/> </div> </div> |  |                                              |  |
| OTHER : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                              |  |



8 7 6 5 4 3 2 1

D

D

C

C

B

B

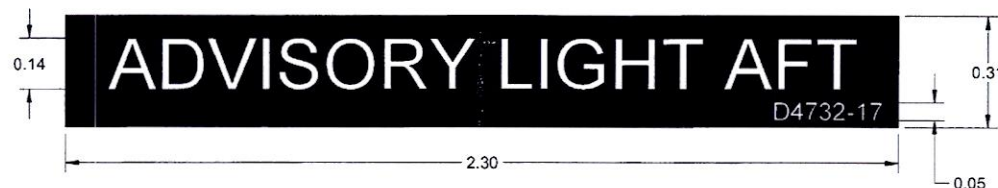
A

A

DAS  
13  
9-89

APR 12 2017

W/O: 159497



D4732-17 LABEL

RELEASED  
2013-01-30  
MD

**NOTES:**

- 1) MATERIAL: MAKE FROM 3M 7 MIL MASKING FILM #8522CP OR AVERY IPM #2031 ARIAL FONT WHITE LETTERS ON BLACK ADHESIVE BACK VINYL
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A

|            |          |                                                                                                                                                                                                                                                                                          |               |
|------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| DESIGN     | RF       | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                 |               |
| DRAWN      | RF       |                                                                                                                                                                                                                                                                                          |               |
| CHECKED    | RF       | DRAWING NO.                                                                                                                                                                                                                                                                              | REV. B        |
| MFG. APPR. | RF       | D4732                                                                                                                                                                                                                                                                                    | SHEET 9 OF 21 |
| APPROVED   | RF       | TITLE                                                                                                                                                                                                                                                                                    | SCALE         |
| DE APPR.   | RF       | LABELS                                                                                                                                                                                                                                                                                   | NTS           |
| DATE       | 12.11.30 | <small>COPYRIGHT © 2012 BY DART AEROSPACE LTD<br/>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small> |               |

8 7 6 5 4 3 2 1



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO35946**

Purchase Order Date 4/12/2017

PO Print Date 4/12/2017

Page Number 1 of 2

**Order From :**

VC-STU001

**Ship To :** DART AEROSPACE LTD

STUDIO DE LETTRAGE 2001  
210 MAIN WEST  
HAWKESBURY, ON K6A 2H6  
CA

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

E-MAILED  
APR 12 2017

**Contact Name**

**Vendor Phone** 613 632 5449

**Ship To Contact**

**Ship To Phone**

**Ship Via:** Yours ppd

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms**

Net 30

**Currency**

CAD

**FOB**

Destination-Collect

| Line Nbr           | Reference Vendor Part Number<br>Line Comments<br>Delivery Comments | Description/<br>Mfg ID | Req Date/<br>Taxable<br>Promise Date | CD | Req Qty/<br>Unit of<br>Measure | PO Unit Price | Extended Price |
|--------------------|--------------------------------------------------------------------|------------------------|--------------------------------------|----|--------------------------------|---------------|----------------|
| 1                  | D3428-1P<br><br>AS PER DWG D3428 REV. A<br>B159495                 | Placard                | 4/19/2017<br>Yes<br>4/19/2017        |    | 6.00<br>Each                   | \$13.33       | \$80.00        |
| <b>Line Total:</b> |                                                                    |                        |                                      |    |                                |               | <b>\$80.00</b> |
| 2                  | D3525-1P<br><br>AS PER DWG D3525 REV. A<br>B159392                 | Placard                | 4/19/2017<br>Yes<br>4/19/2017        |    | 6.00<br>Each                   | \$13.33       | \$80.00        |
| <b>Line Total:</b> |                                                                    |                        |                                      |    |                                |               | <b>\$80.00</b> |
| 3                  | D4732-17P<br><br>AS PER DWG D4732 REV. B<br>B159497                | Label                  | 4/19/2017<br>Yes<br>4/19/2017        |    | 6.00<br>Each                   | \$13.33       | \$80.00        |

**Note:**

4/12/2017

SP17 4-18

210 Main West  
Hawkesbury, Ontario K6A 2H6  
Canada

## INVOICE

Invoice No.: 44096  
Date: 04/17/2017  
Ship Date:  
Page: 1  
Re: Order No.

Sold to:

Dart Aerospace Ltd

1270 Aberdeen  
Hawkesbury, Ontario  
K6A 1K7

Ship to:

Dart Aerospace Ltd

1270 Aberdeen  
Hawkesbury, Ontario  
K6A 1K7

| Quantity                                                                                                                                                                                                                                                      | Description   | Base Price | Disc. % | Unit Price | Amount |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------|---------|------------|--------|
| 6                                                                                                                                                                                                                                                             | D3428-1P.     | 13.33      |         | 13.33      | 79.98  |
| 6                                                                                                                                                                                                                                                             | D3525-1P.     | 13.33      |         | 13.33      | 79.98  |
| 6                                                                                                                                                                                                                                                             | D4732-17P.    | 13.33      |         | 13.33      | 79.98  |
| 6                                                                                                                                                                                                                                                             | D5079-1P.     | 13.33      |         | 13.33      | 79.98  |
|                                                                                                                                                                                                                                                               | PO#35946      |            |         |            |        |
|                                                                                                                                                                                                                                                               | Attn: Chantal |            |         |            |        |
|                                                                                                                                                                                                                                                               | Subtotal:     |            |         |            | 319.92 |
|                                                                                                                                                                                                                                                               | H - HST       |            |         |            | 41.60  |
|                                                                                                                                                                                                                                                               | HST           |            |         |            |        |
| <p style="text-align: center; font-size: 2em; font-family: cursive;">SP17-4-18</p> <p style="text-align: center; font-size: 0.8em;">DAS<br/>38<br/>9-89</p> <p style="text-align: center;">Thank you for your business / Merci de faire affaire avec nous</p> |               |            |         |            |        |
|                                                                                                                                                                                                                                                               |               |            |         |            |        |

|                  |                  |                      |              |        |
|------------------|------------------|----------------------|--------------|--------|
| Shipped By:      | Tracking Number: | HST: 825007651RT0001 | Total Amount | 361.52 |
| Comment: WO20037 |                  |                      | Amount Paid  | 0.00   |
| Sold By:         |                  |                      | Amount Owing | 361.52 |

\*\*\*\***CERTIFICATE of CONFORMITY**\*\*\*\*

**Customer:**

Studio SL2

**Purchase Order N°:**

35946

**Packing Slip N°:**

W0# 20037

**Part N°:**

**Serial N°:**

**Description:**

D3428-1P, D3525-1P,  
D4732-1P, D5079-1P.

**Quantity:**

6,6,6,6.

**Certification:**

We hereby certify that:

1. The above listed items were manufactured, repaired and/or inspected in accordance with applicable drawings and/or specifications;
2. All work was accomplished in accordance with the Dart Aerospace Purchase Order;
3. Results of all inspections, chemical or physical tests, as well as other evidence, which shows the acceptability of raw materials, parts and/or assembly components are on file and available for inspection at any time.

**Authority:**

Avery

**APPROVAL:**

Valerie Young

**Signature:**

Val Y

**Title:**

office administrator

**DATE:**

April 17, 2017.



## Avery® IPM™ 2031

issued: 01/04/2005

### Introduction

Avery® IPM™ 2031 is a high quality pressure-sensitive vinyl film, designed for use on wide format inkjet printers. Avery® IPM™ 2031 has excellent printing properties, allowing crisp print quality with bright and vibrant colours. Avery® IPM™ 2031 offers rapid ink drying and a water-resistant material. It combines good adhesion during its life and easy removal afterwards.

### Description

Facefilm: 80-micron premium white calendered, topcoated vinyl.  
Adhesive: removable, acrylic based  
Backing paper: one side coated kraft paper, 140 g/m<sup>2</sup>

### Features

- Excellent printability
- Vibrant and bright colours
- Crisp print quality
- Spray water resistant wit specific pigmented inks
- Good adhesion, excellent removability
- Warranty on outdoor durability

### Recommendations for use

A wide variety of full-colour graphics for indoor - and **short/medium term outdoor** applications such as posters, murals, displays, exhibition stands, vehicle graphics etc. Avery® IPM™ 2031 is suitable for application to a wide variety of substrates and will remove cleanly for up to 1 year after application.

IPM media should be handled with care as any surface contamination may affect the print quality. Media should be processed in an environment of 15-25°C and 30-70% relative humidity. After drying, the finished prints should be wrapped in polyethylene film and despatched flat or rolled with the printed side facing outwards. To protect prints against water, UV/light and abrasion, overlamination with a clear film is recommended. For specific details of Avery® DOL combinations, refer to "Technical Bulletin 5.3. Recommended combinations of Avery® Overlaminates and Avery® Digital Print Media"

**Always test your combination of Avery® IPM™ medium, inkjet printer and inks prior to commercial use.**

### Compatibility

Avery® IPM™ 2031 is compatible with a broad selection of inkjet printers, when printing with pigmented, water based inks. For specific details refer to "Technical Bulletin 5.6 Avery Dennison Inkjet Print Media - Printer compatibility".

### Durability:

Avery® IPM™ 2031 is warranted for outdoor use in conjunction with pigmented outdoor inks from HP, Encad and Colorspan. The warranted period varies from type of application and type of overlamine from 18 months up to 5 years. For full details, see our Avery® IPM™ Outdoor warranty.



## Physical properties

| Features                                                                            | Test method <sup>1</sup>                                                | Results                                |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------|
| Caliper, facefilm                                                                   | ISO 534                                                                 | 80 µm                                  |
| Gloss                                                                               | ISO 2813, 20°                                                           | 1%                                     |
| Dimensional stability                                                               | DIN 30646                                                               | 0.3 mm. max                            |
| Adhesion, initial                                                                   | FINAT FTM-1, stainless steel                                            | 180 N/m                                |
| Adhesion, ultimate                                                                  | FINAT FTM-1, stainless steel                                            | 260 N/m                                |
| Flammability                                                                        |                                                                         | Self extinguishing                     |
| Accelerating ageing                                                                 | DIN 53587, 500h exposure                                                | No negative impact on film Performance |
| Shelf life                                                                          | Stored at 22° C/50-55 % RH                                              | 2 years                                |
| Removability                                                                        |                                                                         | up to 1 year                           |
| Not when applied to: Nitro-cellulose paints, ABS, Polystyrene, certain types of PVC |                                                                         |                                        |
| Durability <sup>2</sup>                                                             | Overlaminated with DOL 4300                                             | 5 years                                |
|                                                                                     | Overlaminated with DOL 1000, DOL 1100 with overlaps                     | 3 years                                |
|                                                                                     | Overlaminated without overlaps for static applications only             | 2 years                                |
|                                                                                     | Without overlaminate and used for static, Non-abrasive application ONLY | 18 months                              |

Only when printed with ENCAD GO, HP and Colorspan pigmented inks and when properly applied in accordance with our application instructions. Only applicable for vertical exposure.

## Temperature range

| Features                | Results        |
|-------------------------|----------------|
| Application temperature | Minimum: +10°C |
| Service temperature     | -20°C to +80°C |

### Important

Information on physical and chemical characteristics is based upon tests we believe to be reliable. The values listed herein are typical values and are not for use in specifications. They are intended only as a source of information and are given without guarantee and do not constitute a warranty. Purchasers should independently determine, prior to use, the suitability of this material to their specific use. All technical data are subject to change. In case of any ambiguities or differences between the English and foreign versions of these Conditions, the English version shall be controlling.

### Warranty

Avery® branded materials are manufactured under careful quality control and are warranted to be free from defect in material and workmanship. Any material shown to our satisfaction to be defective at the time of sale will be replaced without charge. Our aggregate liability to the purchaser shall in no circumstances exceed the cost of the defective materials supplied. No salesman, representative or agent is authorised to give any guarantee, warranty, or make any representation contrary to the foregoing. All Avery® branded materials are sold subject to the above conditions, being part of our standard conditions of sale, a copy of which is available on request.

### 1) Test methods

More information about our test methods can be found on our website.

### 2) Durability

The durability is based on middle European exposure conditions. Actual performance life will depend on substrate preparation, exposure conditions and maintenance of the marking. For instance, in the case of signs facing south; in areas of long high temperature exposure such as southern European countries; in industrially polluted areas or high altitudes, exterior performance will be decreased

